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BRØNSTED ACIDIC IONIC LIQUID-CATALYZED ONE-POT SYNTHESIS OF 4(3H)QUINAZOLINONES UNDER SOLVENT-FREE CONDITIONS

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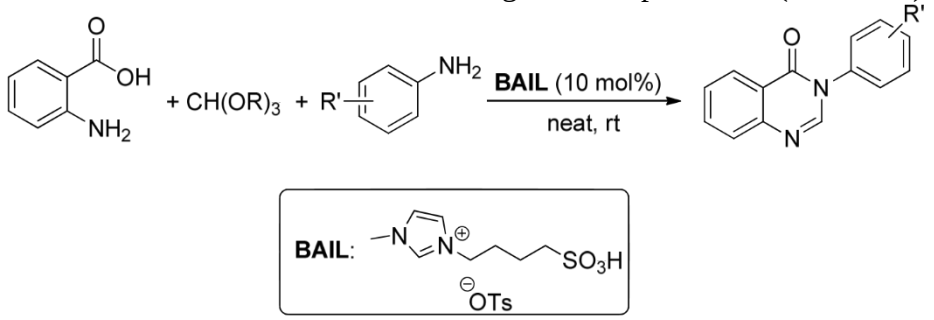
Abstract. 1-Butane sulfonic acid-3-methylimidazolium tosylate, [BSMIM]OTs, is found to be a remarkable catalyst for the synthesis of 4(3*H*)-quinazolinones undersolvent-free conditions. This developed synthetic procedureis applicable for the construction of 4(3*H*)-quinazolinone and its derivatives.These 4(3*H*)-quinazolinone systems have a wide range of useful biological properties, such as anticancer, antiviral, anti-inflammatory, anti-microbial cholinesterase inhibitor, antifolate, antitumor, protein kinase inhibitor and many others.[1]Some of these of quinazolinone derivatives also show potentially pharmacological activities.[2]That's way from long year, many methods have been developed for the synthesis of 4(3*H*)-quinazolinonesusing various catalytic reagents.[3]Keeping in mind the applicability of BAILs we have developed a mild and green synthetic protocol which explore the synthesis of 4(3*H*)-quinazolinones compounds. The feasibility of catalyst recycling has also been demonstrated. Clean reaction, short reaction time, easily accessible reactants, and metal and solvent-free and environmentally friendly reaction conditions are the notable advantages of this procedure (Scheme 1).



Scheme 1. Synthesis of 4(3*H*)-quinazolinones using [BSMIM]OTs

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